Weather Company Data - High-Level Significant Weather Forecast - v2

Domain Portfolio: Weather Imagery Vector Data | Domain: Aviation Forecast | API Name: High-Level Significant Weather - v2

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the “Expires” parameter. Example: “Expires: Fri, 12 Jul 2013 12:00:00 GMT”.

Geography: Global **Attribution Required:** NO **Attribution Requirements:** N/A

Overview

The Feature Data Service (FDS) API provides geographic features for a number of products. The client can use these features to render a visual representation of data.

- FDS provides geometric vector data where each feature can be a set of points, a polygon or set of polygons, a linestring or set of linestrings, or any other valid GeoJSON type
- Each feature is described by a set of geographic coordinates and a set of properties.
- Each feature is uniquely identified by the *combination* of its product key, feature key and valid time; the valid time is used to assign the feature to a unique feature set.
- For additional details about FDS, please see the Weather Company Data | Data Visualization - Feature Data Service | Common Usage Guide
  - https://ibm.biz/BdYrpD

Using FDS products requires a multi-step workflow to retrieve the necessary data for the specific product data request. Step 2 requires the **‘time’** value parameter, found in the response from Step 1.

- **Step 1:** Get Product Info - Provides time-based labels for the feature sets that are currently available.
- **Step 2:** Get Features for a Single Tile - Provides all geographic features for a single tile, taken from a single feature set within a specific product.

URL Construction

Step 1: Get Product Info
Required Parameters: **productKey,** apiKey=**yourApiKey** **||** **Optional Parameters:** meta, max-times https://api.weather.com/v2/vector-api/products/**<productKey>**/info?**apiKey=yourApiKey**
The [**/products/{productKey}/info**] request provides the labels for the feature sets that are currently available. These labels are required as input for the subsequent [**/products/{productKey}/features**] request, and they are invoked in that request’s **‘time’** parameter.
https://api.weather.com/v2/vector-api/products/1262/info?meta=true&max-times=12&apiKey=yourApiKey
Step 2: Get Features for a Single Tile
Required Parameters: **productKey, time, lod, x, y,** apiKey=**yourApiKey** **||** **Optional Parameters:** declutter, tile-size https://api.weather.com/v2/vector-api/products/**<productKey>**/features?time=**<time>**&lod=**<lod>**&x=**<x>**&y=**<y>**&**apiKey=yourApiKey**
The [**/products/{productKey}/features**] request provides a set of features for a single tile, from a particular feature set within a particular product. Each feature contains a small set of key metadata properties, including its ID and valid time, which are required as input for any subsequent [**/products/{productKey}/feature-details**] request, as the **‘feature-id’** and **‘valid-time’** parameters.
https://api.weather.com/v2/vector-api/products/1262/features?time=1492016701805&lod=10&x=175&y=409&tile-size=256&apiKey=yourApiKey

Product Data Dictionary: 1262 - High-Level Significant Weather Forecast - HiSigWx

The source of the data is the high-level prog chart FL240-630 from the Aviation Weather Center, one of nine national centers which comprise the National Centers for Environmental Prediction (NCEP), created by the National Oceanic and Atmospheric Administration (NOAA) to serve the public and the National Weather Service.

The JSON data includes the following fields:

Field *Found in the GeoJSON response, in each feature's **properties** field*	**Description**
forecast_period	Number of hours covered by the forecast
layer_name	Layer type for the JSON feature; examples include CONVECTION, JET_STREAM, STORM, and TURBULENCE
layer_properties	JSON object with contents specific to the particular layer type
valid_time_str	Forecast time; example "02Sep18 00:00Z"
intensity	Additional data field which appears infrequently; this field conveys no significant information to the end user

The following table summarizes the **layer_properties** object for each **layer_name** value. The fields within this **layer_properties** object provide additional information about that particular layer.

Field *Found in the GeoJSON response in the feature's **layer_properties** field*	**Description**
CONVECTION	
convection_type	Type of convection, such as "OCNL/EMBED" for OCNL-embedded convection between **conv_base_level** and **conv_upper_level** Possible values: ISOL/EMBED, OCNL/EMBED, FREQUENT
conv_base_level	Base flight level, where "280" represents FL280 - *A value of "XXX" indicates a base level at or below the product's base level, namely FL250*
conv_upper_level	Upper flight level, where "280" represents FL280
JET_STREAM	
{ }	***layer_property** is an empty JSON object*

JET_STREAM_POINT_DATA	
jet_wind_speed	Speed in knots, example “120” for 120 knots at **jet_wind_level**
jet_wind_level	Flight level, where “280” represents FL280
RADIATION	
{ }	***layer_property*** *is an empty JSON object*
STORM - *indicates a tropical storm*	
{ }	***layer_property*** *is an empty JSON object*
TROPOPAUSE	
trop_type	Type of troposphere forecast at an altitude of **trop_height** ● “LOW” for a relative minimum with respect to the surrounding area ● “HIGH” for a relative maximum with respect to the surrounding area ● “SPOT” for an ordinary troposphere level
trop_height	Flight level, where “280” represents FL280
TURBULENCE	
turbulence_type	Possible values: MOD, MOD/SEV, SEV
turb_base_level	Base flight level, where “280” represents FL280 - *A value of “XXX” indicates a base level at or below the product’s base level, namely FL250*
turb_upper_level	Upper flight level, where “280” represents FL280
TURBULENCE_POINT_DATA	
turb_base_level	Base flight level, where “280” represents FL280 - *A value of “XXX” indicates a base level at or below the product’s base level, namely FL250*
turb_upper_level	Upper flight level, where “280” represents FL280
VOLCANO	
{ }	***layer_property*** *is an empty JSON object*

Document Revision History

Revision	Date	Notes
1.0	Dec 7, 2018	Initial versioned document; addition of Document Revision History